

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

**1-19. (canceled).**

**20. (withdrawn-previously presented):** A process for the manufacture of bread-making dough aromatized with cinnamon comprising the use of a baker's yeast selected from the group consisting of the baker's yeast having good general performance in not delayed bread-makings, resistant to stress caused by freezing when used in sweetened doughs, and which does not produce off-flavors in the presence of cinnamon, baker's yeast obtained by a process comprising using as a starting strain, a strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422), similar strains to said strains CNCM I-2421 and CNCM I-2422, and baker's yeast strains obtained by clean inactivation of PAD1 gene(s).

**21. (withdrawn-previously presented):** A process for the manufacture of frozen sweetened dough pieces comprising using a new baker's yeast selected from the group consisting of the baker's yeast having good general performance in not delayed bread-makings, resistant to stress caused by freezing when used in sweetened doughs, and

which does not produce off-flavors in the presence of cinnamon, baker's yeast obtained by the process comprising using as a starting strain a strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422), similar strains to said strains CNCM I-2421 and CNCM I-2422, and baker's yeast strains obtained by clean inactivation of PAD1 gene(s).

**22. (withdrawn):** A process for the production of bread-making dough according to claim 20 wherein the baker's yeast used is in the form of a frozen intermediate dry yeast product.

**23-24. (canceled).**

**25. (withdrawn):** A process for the production of breadmaking dough according to claim 21 wherein the baker's yeast used in is the form of a frozen intermediate dry yeast product.

**26. (currently amended):** A baker's yeast composition which:

- has good general performance in bread-making processes that do not comprise a freezing or a deep-freezing step, wherein said good general performance is determined by gas release results according to fermentometer tests A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub>

carried out with a Burrows and Harrison fermentometer, wherein the following gas releases in fermentometer tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> are provided:

- test A<sub>1</sub>, at least 150 ml in two hours,
- test A<sub>5</sub>, at least 90 ml in two hours,
- test A<sub>6</sub>, at least 80 ml in two hours

is resistant to stress caused by freezing when used in sweetened doughs, and which is obtained by a cultivation process for manufacturing said baker's yeast composition, comprising cultivating a starting yeast strain selected from the group consisting of:

- isolated yeast strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422) and
- ~~isolated/recombinant~~isolated or recombinant baker's yeast strains obtained by clean inactivation of PAD1 gene(s) in a strain of a baker's yeast which is resistant to stress caused by freezing.

**27. (previously presented):** The baker's yeast composition according to claim 26:

- wherein said gas release results based upon fermentometer tests A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> carried out with a Burrows and Harrison fermentometer are at least equivalent to gas release results obtained with a control yeast produced by a cultivation process for manufacturing said control yeast, wherein the control yeast is obtained by cultivating an isolated strain deposited under the number I-2412 (CNCM I-2412),

- and wherein the baker's yeast composition, when used to produce dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at - 20 °C and thereafter thawed,
- provides a total gas release measured with a zymotachygraphe for 2 hours and 30 minutes at 27 °C, of at least 20 % higher than said control yeast in a dough of the same formulation and frozen and thawed under the same conditions, and
- provides a proof time of said dough measured at 35 °C of at least 10 % lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.

**28. (previously presented):** A baker's yeast composition obtained by a cultivation process for the manufacture of said baker's yeast composition, comprising cultivating a starting strain, wherein said starting strain is an isolated strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the number I-2421 (CNCM I-2421).

**29. (previously presented):** A baker's yeast composition obtained by a cultivation process for the manufacture of said baker's yeast composition comprising, cultivating a starting strain, wherein said starting strain is an isolated strain deposited according to

the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the number I-2422 (CNCM I-2422).

**30. (canceled).**

**31. (currently amended):** A baker's yeast composition obtained by a cultivation process for the manufacture of said baker's yeast composition comprising cultivating a starting strain, wherein said starting strain is an ~~isolated/recombinant~~isolated or recombinant baker's yeast strain, which is obtained by clean inactivation in a strain of a baker's yeast which is resistant to stress caused by freezing of PAD1 gene(s) encoding phenylacrylic acid decarboxylase, wherein said clean inactivation is a modification which cuts out expression of inactivated genes without leading to expression of a heterologous gene.

**32. (previously presented):** The baker's yeast composition according to claim 26, wherein said cultivation process comprises two or more consecutive cycles of cultivation and a discontinuous inflow of molasses is provided during the whole or part of the last cycle of cultivation.

**33. (currently amended):** A baker's yeast composition obtained by a cultivation process for the manufacture of said baker's yeast composition comprising:

cultivating a starting strain selected from the group consisting of:

- isolated yeast strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422) and
- ~~isolated/recombinant~~isolated or recombinant baker's yeast strains obtained by clean inactivation of PAD1 gene(s)

wherein said cultivation process comprises two or more consecutive cycles of cultivation wherein a discontinuous inflow of molasses is provided during the whole or part of the last cycle of multiplication of said starting strain.

**34. (previously presented):** The baker's yeast composition according to claim 26 wherein said baker's yeast composition is in the form of a frozen active intermediate dry yeast composition having between 70 and 80 % dry matter.

**35. (previously presented):** The baker's yeast composition according to claim 26 wherein said baker's yeast composition is in the form of a frozen active intermediate dry yeast composition having between 70 and 80 % dry matter and providing the following gas releases in fermentometer tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> carried out with a Burrows and Harrison fermentometer:

test A<sub>1</sub> 170 ml to 190 ml in two hours,

test A<sub>5</sub> 110 ml to 130 ml in two hours,

test A<sub>6</sub> 115 ml to 140 ml in two hours.

**36. (canceled).**

**37. (currently amended):** A baker's yeast composition in the form of particles of intermediate frozen active dry yeast having between 70% and 80% dry matter and which

- has good general performance in bread-making processes that do not comprise a freezing or a deep-freezing step, wherein said good general performance is determined by gas release results according to fermentometer tests A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> carried out with a Burrows and Harrison fermentometer

- is resistant to stress caused by freezing when used in sweetened doughs,

and which provides the following gas releases in fermentometer test A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> carried out using a Burrows and Harrison fermentometer:

test A<sub>1</sub> 170 ml to 190 ml in two hours,

test A<sub>5</sub> 110 ml to 130 ml in two hours,

test A<sub>6</sub> 115 ml to 140 ml in two hours,

and which are obtained by a process comprising:

- (1) using as a starting strain in a cultivation process for the manufacture of said yeast composition, a yeast strain selected from the group consisting of:

- isolated strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422), and
  - ~~isolated/recombinant~~isolated or recombinant baker's yeast strains obtained by clean inactivation of the PAD1 gene(s) in a strain of a baker's yeast which is resistant to stress caused by freezing; and
- (2) cultivating said starting strain according to said cultivation process for the manufacture of said baker's yeast composition, said cultivation process comprising two or more consecutive cycles of cultivation wherein a discontinuous inflow of molasses is provided during the whole or part of the last cycle of cultivation of said starting strain.

**38. (previously presented):** An isolated baker's yeast strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", under the number I-2421 (CNCM I-2421).

**39. (previously presented):** An isolated baker's yeast strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the number I-2422 (CNCM I-2422).



- 40. (currently amended):** An ~~isolated/recombinant~~isolated or recombinant baker's yeast strain obtained by clean inactivation of the PAD1 gene(s) in a strain of baker's yeast.
- 41. (previously presented):** A process for the preparation of a baker's yeast composition comprising a cultivation process for the manufacture of said yeast composition comprising cultivating a starting strain which is an isolated strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the number I-2421 (CNCM I-2421) and harvesting to provide said baker's yeast composition.
- 42. (previously presented):** A process for the preparation of a baker's yeast composition comprising a cultivation process for the manufacture of said yeast composition comprising cultivating a starting strain which is an isolated strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the number I-2422 (CNCM I-2422) and harvesting to provide said baker's yeast composition.
- 43. (previously presented):** A process for the preparation of a baker's yeast composition comprising a cultivation process for the manufacture of said baker's yeast comprising cultivating a starting strain which is a baker's yeast strain obtained by clean

inactivation of the PAD1 gene(s) in a baker's yeast which is resistant to stress caused by freezing and harvesting to provide said baker's yeast composition.

- 44. (previously presented):** The process for the preparation of a baker's yeast composition according to claim 41 wherein said starting strain is cultivated according to a process comprising two or more consecutive cycles of cultivation wherein a discontinuous inflow of molasses is provided during the whole or part of the last cycle of cultivation.
- 45. (previously presented):** The process for the preparation of a baker's yeast composition according to claim 42 wherein said starting strain is cultivated according to a process comprising two or more consecutive cycles of cultivation wherein a discontinuous inflow of molasses is provided during the whole or part of the last cycle of cultivation.
- 46. (previously presented):** The process for the preparation of a baker's yeast composition according to claim 43 wherein said starting strain is cultivated according to a process comprising two or more consecutive cycles of cultivation wherein a discontinuous inflow of molasses is provided during the whole or part of the last cycle of cultivation.

- 47. (previously presented):** The baker's yeast composition according to claim 27, which when used to produce the dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at -20°C and thereafter thawed,
- provides a total gas release measured with a zymotachygraphe for 2 hours and 30 minutes at 27°C of at least 30% higher than the control yeast in a dough of the same formulation and frozen and thawed under the same conditions, and
  - provides a proof time of said dough measured at 35°C of at least 15% lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.
- 48. (previously presented):** The baker's yeast composition according to claim 27 which when used to produce the dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at -20°C and thereafter thawed,
- provides a total gas release measured with a zymotachygraphe during 2 hours and 30 minutes at 27°C of at least 40% higher than the control yeast in a dough of the same formulation and frozen and thawed under the same conditions, and
  - provides a proof time of said dough measured at 35°C of at least 20% lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.

- 49. (previously presented):** The baker's yeast composition according to claim 34, wherein said baker's yeast composition is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.
- 50. (previously presented):** The baker's yeast composition according to claim 34, wherein said baker's yeast composition is in the form of a frozen intermediate active dry yeast composition having between 74 and 78% dry matter.
- 51. (previously presented):** The baker's yeast composition according to claim 35, wherein said baker's yeast composition is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.
- 52. (previously presented):** The baker's yeast composition according to claim 33, wherein said baker's yeast composition is in the form of a frozen intermediate active dry yeast composition having between 70 and 80% dry matter.
- 53. (previously presented):** The baker's yeast composition according to claim 37, wherein said baker's yeast composition is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.

**54. (currently amended):** A baker's yeast composition comprising yeast strains selected from the group consisting of isolated yeast strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I-2421) and I-2422 (CNCM I-2422) and ~~isolated/recombinant~~isolated or recombinant baker's yeast strains obtained by clean inactivation of PAD1 gene(s) in a strain of a baker's yeast which is resistant to stress caused by freezing.

**55. (previously presented):** The baker's yeast composition of claim 54, which:  
has good general performance in bread-making processes that do not comprise a freezing or deep-freezing step, wherein said good general performance is determined by gas release results according to fermentometer tests A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> carried out with a Burrows and Harrison fermentometer wherein the following gas releases in fermentometer tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> are provided:

- test A<sub>1</sub>, at least 150 ml in two hours,
- test A<sub>5</sub>, at least 90 ml in two hours,
- test A<sub>6</sub>, at least 80 ml in two hours and

is resistant to stress caused by freezing when used in sweetened doughs .

**56. (previously presented):** The baker's yeast composition of claim 55:

- wherein said gas release results based upon fermentometer tests A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> carried out with a Burrows and Harrison fermentometer are at least equivalent to gas release results obtained with a control yeast produced by a cultivation process for manufacturing said control yeast, by cultivating an isolated strain deposited under the number I-2412 (CNCM I-2412),
- and wherein the baker's yeast composition, when used to produce dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at - 20 °C and thereafter thawed,
- provides a total gas release measured with a zymotachygraphe for 2 hours and 30 minutes at 27 °C, of at least 20 % higher than said control yeast in a dough of the same formulation and frozen and thawed under the same conditions, and
- provides a proof time of said dough measured at 35 °C of at least 10 % lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.

**57. (previously presented):** The baker's yeast composition of claim 55, wherein said baker's yeast composition is in the form of a frozen active intermediate dry yeast composition having between 70 and 80% dry matter.

- 58. (previously presented):** The baker's yeast composition of claim 55 wherein said baker's yeast composition is in the form of a frozen active intermediate dry yeast composition having between 70 and 80 % dry matter and providing the following gas releases in fermentometer tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> carried out with a Burrows and Harrison fermentometer
- test A<sub>1</sub> 170 ml to 190 ml in two hours,
- test A<sub>5</sub> 110 ml to 130 ml in two hours,
- test A<sub>6</sub> 115 ml to 140 ml in two hours.
- 59. (previously presented):** The baker's yeast composition of claim 58, in the form of particles of intermediate frozen active dry yeast between 70 and 80 % dry matter.
- 60. (previously presented):** The baker's yeast composition of claim 55, which when used to produce the dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at -20°C and thereafter thawed,
- provides a total gas release measured with a zymotachygraphe for 2 hours and 30 minutes at 27°C of at least 30% higher than a control yeast produced by a cultivation process for manufacturing said control yeast, by cultivating an isolated strain deposited under the number I-2412 (CNCM I-2412) in a dough of the same formulation and frozen and thawed under the same conditions, and

- provides a proof time of said dough measured at 35°C of at least 15% lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.

**61. (previously presented):** The baker's yeast composition of claim 55, which when used to produce the dough having a formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to a total amount of flour, whereby said dough is frozen for 100 days at -20°C and thereafter thawed,

- provides a total gas release measured with a zymotachygraphe during 2 hours and 30 minutes at 27°C of at least 40% higher than a control yeast produced by a cultivation process for manufacturing said control yeast, by cultivating an isolated strain deposited under the number I-2412 (CNCM I-2412) in a dough of the same formulation and frozen and thawed under the same conditions, and
- provides a proof time of said dough measured at 35°C of at least 20% lower than the proof time obtained with said control yeast in a dough of the same formulation and frozen and thawed under the same conditions.

**62. (previously presented):** The baker's yeast composition of claim 57, wherein said baker's yeast is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.



- 63. (previously presented):** The baker's yeast composition of claim 57, wherein said baker's yeast is in the form of a frozen intermediate active dry yeast composition having between 74 and 78% dry matter.
- 64. (previously presented):** The baker's yeast composition of claim 58, wherein said baker's yeast is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.
- 65. (previously presented):** The baker's yeast composition of claim 59, wherein said baker's yeast is in the form of a frozen intermediate active dry yeast composition having between 72 and 78% dry matter.
- 66. (previously presented):** The baker's yeast composition of claim 26, which does not produce bad taste and off flavors in the presence of cinnamon, as evidenced by the presence of cinnamic acid and/or by the presence of styrene in a solution fermented in the presence of cinnamic acid.
- 67. (previously presented):** The baker's yeast composition of claim 37, which does not produce bad taste and off flavors in the presence of cinnamon, as evidenced by the presence of cinnamic acid and/or by the presence of styrene in a solution fermented in the presence of cinnamic acid.

- 68. (previously presented):** The baker's yeast composition of claim 55, which does not produce bad taste and off flavors in the presence of cinnamon, as evidenced by the presence of cinnamic acid and/or by the presence of styrene in a solution fermented in the presence of cinnamic acid.
- 69. (new):** An isolated or recombinant baker's yeast strain obtained by clean inactivation of PAD1 gene(s) in a strain of baker's yeast and resistant to the stress caused by freezing.
- 70. (new):** A process for the manufacture of bread-making dough aromatized with cinnamon comprising the use of a baker's yeast obtained by a process comprising the use as starting strain of a strain selected from the group consisting of the strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I2421) and I-2422 (CNCM I2422) and baker's yeast strains obtained by clean inactivation of PAD1 gene(s).
- 71. (new):** A process for the manufacture of frozen sweetened dough pieces using a baker's yeast obtained by a process comprising the use as starting strain of a strain selected from the group consisting of the strains deposited according to the Budapest

Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, under the numbers I-2421 (CNCM I2421) and I-2422 (CNCM I2422) and baker's yeast strains obtained by clean inactivation of PAD1 gene(s).

- 72. (new):** A process for the production of bread-making dough wherein the baker's yeast used is in the form of a frozen intermediate dry yeast product.
- 73. (new):** A process for the selection of baker's yeasts comprising:
- a first selection test consists in selecting those fresh baker's yeasts that give rise to the following total amount gas released in the tests A1, A5 and A6:
    - in test A1 : at least 150 ml in two hours,
    - in test A5 : at least 90 ml in two hours, and
    - in test A6 : at least 80 ml in two hours;
  - a second selection test consists in selecting baker's yeasts which do not give rise to the appearance of bad taste or off-flavors in the presence of cinnamon, as evidenced by the presence of cinnamic acid and/or by the presence of styrene in a solution fermented in the presence of cinnamic acid; and
  - a third selection test consists in selecting baker's yeasts which provide dough pieces of sweet Danish pastries obtained as here-above disclosed and thawed after having been stored for 100 days at - 20°C, which showed the following performances:

- total amount of gas released measured using a zymotachygraphe in 2 hours and 30 minutes at 27°C at least 20 % higher than the total amount of gas released measured under the same test conditions using the control yeast manufactured starting from the strain CNCM I-2412 by means of a conventional process of baker's yeast manufacture
- proof time lower is at least 10 % shorter than the proof time measured under the same test conditions using the control yeast,
- absence of any bad taste or any off-flavors.